WHAT IS CLAIMED IS:

1. A layered signal for transmitting data, comprising:

a first signal layer including a first carrier and first signal symbols for a first digital signal transmission; and

a second signal layer including a second carrier and second signal symbols for a second signal transmission disposed on the first signal layer;

wherein the layered signal has the first carrier demodulated and first layer signal decoded to produce the first signal symbols for a first layer transport, the first signal symbols are remodulated and subtracted from the layered signal to produce the second signal layer, and the second signal layer has the second carrier demodulated and decoded to produce the second signal symbols for a second layer transport.

2. The layered signal of claim 1, wherein at least one of the first and second signal layers are quadrature phase shift keyed (QPSK).

3. The layered signal of claim 1, wherein a code rate for at least one of the first and second signal layers is 6/7.

4. The layered signal of claim 1, wherein a code rate for at least one of the first and second signal layers is 2/3.

5. The layered signal of claim 1, wherein a code rate for at least one of the first and second signal layers is 1/2.

6. The layered signal of claim 1, wherein the second signal layer is generated by power boosting a legacy signal.

7. The layered signal of claim 1, wherein a total code and noise level of the second signal layer is no greater than a noise floor of the first signal layer.

8. The layered signal of claim 1, wherein at least one of the first and second signal layers are coded using a turbo code.

9. The layered signal of claim 1, wherein both the first and second signal layers are coded using a single turbo code.

10. The layered signal of claim 1, wherein the first and second layer each have a frequency that is substantially similar.

11. The layered signal of claim 1, wherein the first and second layer each have a frequency with a frequency offset therebetween.

12. A method of transmitting layered signals, comprising:

transmitting a first signal layer including a first carrier and first signal symbols for a first digital signal transmission; and

transmitting a second signal layer including a second carrier and second signal symbols for a second signal transmission disposed over the first signal layer;

wherein the layered signal has the first carrier demodulated and first layer decoded to produce the first signal symbols for a first layer transport, the first signal symbols are remodulated and subtracted from the layered signal to produce the second signal layer, and the second signal layer has the second carrier demodulated and decoded to produce the second signal symbols for a second layer transport.

13. The method of claim 12, wherein at least one of the first and second signal layers are quadrature phase shift keyed (QPSK).

14. The method of claim 12, wherein a code rate for at least one of the first and second signal layers is 6/7.

15. The method of claim 12, wherein a code rate for at least one of the first and second signal layers is 2/3.

16. The method of claim 12, wherein a code rate for at least one of the first and second signal layers is 1/2.

17. The method of claim 12, wherein the second signal layer is generated by power boosting a legacy signal.

18. The method of claim 12, wherein a total code and noise level of the first signal layer is no greater than a noise floor of the second signal layer.

19. The method of claim 12, wherein at least one of the first and second signal layers are coded using a turbo code.

20. The method of claim 12, wherein both the first and second signal layers are coded using a single turbo code.

21. A receiver system for demodulating and decoding layered transmission signals, comprising:

a first demodulator for demodulating a first carrier of a first layer of a received signal;

a first layer decoder for decoding the first layer producing first signal symbols for a first layer transport;

a remodulator for receiving the first signal symbols and producing a first layer signal;

a subtracter for subtracting the first layer signal from the received signal and producing a second layer signal;

a second layer demodulator receiving the second layer signal for demodulating a second carrier of a second layer and producing a second demodulator output; and

a second layer decoder receiving the second demodulator output and decoding the second layer producing second signal symbols for a second layer transport.

22. The receiver system of claim 21, wherein the first layer signal includes the first carrier and is subtracted from the received signal before the first carrier is demodulated.

23. The receiver system of claim 21, wherein the first layer signal does not include the first carrier and is subtracted from the received signal after the first carrier is demodulated.

24. The receiver system of claim 21, further comprising a non-linear distortion map for removing non-linear distortion effects from the first signal layer.

25. The receiver system of claim 21, wherein the first layer of the received signal is a boosted legacy signal.

26. The receiver system of claim 21, wherein at least one of the first and second signal layers are quadrature phase shift keyed (QPSK).

27. The receiver system of claim 21, wherein a code rate for at least one of the first and second signal layers is 6/7.

28. The receiver system of claim 21, wherein a code rate for at least one of the first and second signal layers is 2/3.

29. The receiver system of claim 21, wherein a code rate for at least one of the first and second signal layers is 1/2.

30. The receiver system of claim 21, wherein the second signal layer is generated by power boosting a legacy signal.

31. The receiver system of claim 21, wherein a total code and noise level of the first signal layer is no greater than a noise floor of the second signal layer.

32. The receiver system of claim 21, wherein at least one of the first and second signal layers are coded using a turbo code.

33. The receiver system of claim 21, wherein both the first and second signal layers are coded using a single turbo code.

34. The receiver system of claim 21, wherein the first and second layer each have a frequency that is substantially similar.

35. The receiver system of claim 21, wherein the first and second layer each have a frequency with a frequency offset therebetween.

36. The receiver system of claim 21, wherein the remodulator receives the first decoded symbols after a Viterbi decode.

37. The receiver system of claim 21, wherein the remodulator receives the first decoded symbols after a Reed-Solomon decode.

38. A method of demodulating and decoding, comprising:

demodulating a first carrier of a first layer of a received signal;

decoding the first layer to produce first layer symbols for a second layer transport;

remodulating the first layer symbols to produce a first layer signal;

subtracting the first layer signal from the received signal producing a second layer signal;

demodulating a second carrier of the second layer signal; and

decoding the second layer to produce second decoded symbols for a second layer transport.

39. The method of claim 38, wherein the first layer signal includes the first carrier and is subtracted from the received signal before the first carrier is demodulated.

40. The method of claim 38, wherein the first layer signal does not include the first carrier and is subtracted from the received signal after the first carrier is demodulated.

41. The method of claim 38, further comprising a non-linear distortion map for removing non-linear distortion effects from the first signal layer produced by the remodulator.

42. The method of claim 38, wherein the first layer of the received signal is a boosted legacy signal.

43. The method of claim 38, wherein at least one of the first and second signal layers are quadrature phase shift keyed (QPSK).

44. The method of claim 38, wherein a code rate for at least one of the first and second signal layers is 6/7.

45. The method of claim 38, wherein a code rate for at least one of the first and second signal layers is 2/3.

46. The method of claim 38, wherein a code rate for at least one of the first and second signal layers is 1/2.

47. The method of claim 38, wherein the second signal layer is generated by power boosting a legacy signal.

48. The method of claim 38, wherein a total code and noise level of the first signal layer is no greater than a noise floor of the second signal layer.

49. The method of claim 38, wherein at least one of the first and second signal layers are coded using a turbo code.

50. The method of claim 38, wherein both the first and second signal layers are coded using a single turbo code.

51. The method of claim 38, wherein the first and second layer each have a frequency that is substantially similar.

52. The method of claim 38, wherein the first and second layer each have a frequency with a frequency offset therebetween.

53. The method of claim 38, wherein error correction decoding the first modulator output includes a Viterbi decode and error correction remodulating is performed after the Viterbi decode.

54. The method of claim 38, wherein error correction decoding the first modulator output includes a Reed-Solomon decode and error correction re-encoding is performed after the Reed-Solomon decode.